

eISSN : 2579-8324

pISSN : 2579-8323

Address for Correspondence:Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127**Website:**<http://jurnalobgin.fk.unand.ac.id/index.php/JOE>**RESEARCH**

Analysis of the stress level of resident physician education program specialist in Obstetrics and Gynecology Andalas University in 2020

Ari Fuad Fajri¹, Bobby Indra Utama², Hardisman³

Affiliations: 1. Obstetrics and Gynecology Department, Dr. M. Djamil Central General Hospital Padang, West Sumatera, Indonesia; 2. Sub Division of Urogynecology, Obstetrics and Gynecology Department, Faculty of Medicine, Andalas University, Dr. M. Djamil Central General Hospital Padang, West Sumatera, Indonesia; 3. Public health Department, Faculty of Medicine, Andalas University, West Sumatera, Indonesia

Correspondence: Ari Fuad Fajri email: affajri@gmail.com, Hp: 08112332121

Abstract

Introduction: The Specialist Doctor Education Program (PPDS) is one of the academic education of general practitioners and is known as a resident doctor to become a specialist and is at the forefront of health services. Resident doctors are expected to be flexible clinicians, educators, researchers, and administrators by the end of their residency training. It often requires stressful hard work, and is often reported as a cause of burnout, anxiety, depression, anger, irritability, anxiety, sleep deprivation, fatigue, substance abuse, and psychosocial problems. One of the problems that often occurs with residents is long working hours. Based on the working hours regulation adopted in the UK since 1998, namely the European Working Time Directive (EWTD) and a policy change in 2007 and 2009 called The New Deal, the working hours of resident doctors to achieve optimal performance is 56 hours per week. In the initial survey of 10 PPDS Obgin Unand residents, network station residents still had to carry out their duties 24 hours a day for 1 month in the hospital. Except for applying for certain permits. If you add up, the average working hours in 1 week is more than 60 working hours.

Objective: This study aims to determine the stress level of resident doctors in the Education Program of Obstetric and Gynecology Specialist, Andalas University in 2020

Methods: This research is a quantitative study followed by qualitative method using an explanatory design. Data was taken using the triangulation method. The data was taken from questionnaires, Focus Group Discussion (FGD), and document review from Obstetric and Gynecology residents of all semester at Andalas University.

Results: The highest stress level in the Obstetric and Gynecology residents of Andalas University in 2020 was 60.3% at moderate level, there was a relationship between stress levels with graduation and semester. The highest stress domain is ARS (Academic Related Stressor) and SRS (Social Related Stressor).

Conclusion: the stress level in the Obstetric and Gynecology residents of Andalas University in 2020 is at a moderate level, and the highest stress domain is ARS (Academic Related Stressor) and SRS (Social Related Stressor).

Keywords: Resident Doctor; Obstetric and Gynecology; stress



eISSN : 2579-8324

pISSN : 2579-8323

Address for Correspondence:Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127**Website:**<http://jurnalobgin.fk.unand.ac.id/index.php/JOE>**INTRODUCTION**

Stress is variously defined as a general event as a response to an event or situation, and is a process, where stress is a stimulus that requires biological, psychological, and social adaptation.^{1,2} Stress is a common problem that occurs in human life. Kupriyanov and Zhdanov state that current stress is an attribute of modern life.³ Stress is divided into two types, namely Eustress and Distress. WHO states that stress is dubbed the health epidemic of the 21st century, where nearly 350 million people in the world experience stress and stress is a disease with the 4th rank in the world.^{4,5}

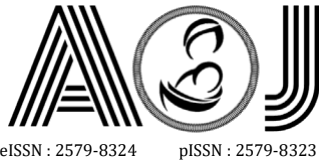
The academic environment is the most stressful place. Demir et al. mentions that the average stress on doctors is higher than the average in the community in general, so doctors are also a professional group at high risk for experiencing stress.⁶

The Specialist Doctor Education Program (PPDS) is one of the academic education of general practitioners and is known as a resident doctor to become a specialist and is at the forefront of health services. Resident doctors are expected to be flexible clinicians, educators, researchers, and administrators by the end of their residency training. It often requires stressful hard work, and is often reported as a cause of burnout, anxiety, depression, anger, irritability, anxiety, sleep deprivation, fatigue, substance abuse, and psychosocial problems.^{7,8} Other stressors that can arise for resident doctors such as the availability of funds, the volume of learning materials that must be known, the complexity of the problems studied, limited time to learn new material, exams, the need to do research, and ambiguity of the expected learning outcomes.^{9,10,22}

Long work hours and unpredictable workloads have become an integral part of resident doctors. This has a significant effect on the performance of doctors and patient safety. Lockley et al., found that resident physicians who were on duty 24 hours a day made 36% more serious medical errors than physicians on duty 16 hours, made five times more misdiagnoses, experienced 61% more accidents related to with a needle or sharp object after 20 hours of vigilance, doubles the risk of a driving accident, and suffers a decrease in performance equivalent to that caused by a blood alcohol level of 0.05-0.10%.^{11,12,13}

Obgyn resident (PPDS) of Andalas University Padang has an educational program for 8 semesters with a 1-4 semester system with a rotation system at health centers around Padang City, regional hospitals and at Dr M. Djamil Hospital, Padang City every month. January 2020, the number of residents of Obgin Unand was 77 people.¹⁴

One of the problems that often occurs with residents is long working hours. Based on the working hours regulation adopted in the UK since 1998, namely the European Working Time Directive (EWTD) and a policy change in 2007 and 2009 called The New Deal, the working hours of resident doctors to achieve optimal performance is 56 hours per week. In the initial survey of 10 PPDS Obgin Unand residents, network station residents still had to carry out their duties 24 hours a day for 1 month in the hospital. Except for applying for certain permits. If you add up, the average working hours in 1 week is more than 60 working hours.^{12,14,15}



eISSN : 2579-8324

pISSN : 2579-8323

ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL

Address for Correspondence:

Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127

Website:

<http://jurnalobgin.fk.unand.ac.id/index.php/JOE>

Based on the condition of high stress risk in Obstetric Resident Doctors which can have a negative effect on themselves, their families, social environment, and on patients who are treated directly, it is necessary to detect and manage stressors to be important to minimize the risk of negative consequences from stress by conducting research. analyzing the stress level at the Resident Doctor of the Andalas University Specialist Doctor of Obstetrics and Gynecology Education Program in 2020.

METHODS

This research is a quantitative study followed by qualitative research using an explanatory design. Data was taken using the triangulation method with data sources from questionnaires, Focus Group Discussion (FGD), and document review from all residents of semester I-VIII PPDS OBGIN Universitas Andalas Padang in 2020.

The sample size in this study used a non-probability sampling method, namely saturated sampling by taking all members of the population used as samples. This is done because the population is relatively small and wants to make generalizations with relatively small errors.¹⁶

Data analysis in this study used the triangulation method with data sources from questionnaires, Focus Group Discussions (FGD), and document review. Questionnaires were used as initial data in this study. After getting the initial data, it was continued by conducting a Focus Group Discussion (FGD) with the selected resource persons and conducting a review of the judicial results document.

This research was carried out after obtaining a certificate of permission issued by the Obstetrics and Gynecology section of Dr. M. Djamil Padang and the Faculty of Medicine, Andalas University.

RESULTS

This study was conducted on all Resident Doctors using a questionnaire on as many as 73 people. The results of the highest stress level for the Resident Doctor of PPDS Obstetrics and Gynecology Andalas University in 2020 were 60.3% at a moderate level. There is a relationship between stress levels with graduation and semester levels in 2020. Meanwhile, in qualitative research, the highest stress domain was obtained at the Resident Doctors of PPDS Obstetrics and Gynecology Andalas University with semester levels in 2020 being ARS (Academic Related Stressor) and SRS (Social Related stressors).

The stressor domain ARS (Academic Related Stressor) that causes the highest stress is the requirement for an increase in the level of residency to subsections (semesters 4 to 5, and semesters 6 to 7), placement and holiday systems at network stations, and the schedule of box exchanges at the beginning of each month. In the domain of SRS (Social Related Stressor) stressors, namely access to meet family is uncertain because there is no time off at network



eISSN : 2579-8324

pISSN : 2579-8323

Address for Correspondence:Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127**Website:**<http://jurnalobgin.fk.unand.ac.id/index.php/JOE>

stations.

DISCUSSION

The highest stress level for the Resident Doctor of PPDS Obstetrics and Gynecology Andalas University in 2020 was at a moderate stress level of 60.3%, followed by mild stress at 34.2% and severe stress at 5.5%. These results are in accordance with research conducted by Malviya et al, which found 58.6% of resident level students who experienced stress.⁷

Judging from the type of stressor that causes stress at the Resident Doctor of PPDS Obstetrics and Gynecology, Andalas University in 2020, it was found that the stress domain ARS (Academic Related Stressors) was the highest number, where it was known that more than half of the respondents (68.5%) had moderate stress and (13, 7%) respondents have severe stress. The results of this study are in accordance with Yusoff and Rahim (2014) that the main stressors are academic-related stressors.^{17,18} ARS stressors refer to stressors that can be caused by universities, colleges, education, and student activities. This also includes the examination system, assessment method, level promotion method, class schedule, student activities related to academic activities.¹⁷

The second highest number was followed by the SRS (Social Related Stressors) domain stressor, which was 46.6% of respondents with moderate stress and 11% with severe stress. This is supported by the results of the questionnaire in the statement of lack of time to be with the correspondent's family who stated severe stress (21.9%) and very heavy stress (34.2%).

Analysis of the relationship between stress levels at the Resident Doctors of PPDS Obstetrics and Gynecology Andalas University with Semester Levels in 2020 obtained p value = 0.045 ($p < 0.05$), which means there is a significant relationship. Further analysis was carried out using multinomial logistic regression. The results of the analysis are known as the following semester III and followed by semester VI. The results of this study differ from the Navines study where stress is highest in first-year residents. The same results were also found in Moutinho's study of all Brazilian medical students in 2017. Jafari et al. in 2012 stated the highest stress in the first year as much as 82.1%. This is different from this study because in the third semester the resident begins to have a greater workload and responsibility and is the highest level in mastering the field of obstetrics. Meanwhile, in semester VI, it is a subdivision and preparation of thesis preparation tasks, where you must complete a thesis as one of the requirements to move up to semester VII or Chief of Resident.^{9,19,20}

Based on the analysis of the relationship between stress levels at the Resident Doctors of PPDS Obstetrics and Gynecology, Andalas University with graduation in 2020, it is known that more respondents who did not pass graduation with moderate-severe stress levels 82.6%. While the respondents who passed were more at the level of mild stress, namely 42.0%. Based on the results of statistical tests using chi-square, it is known that there is a significant relationship between stress levels in the Resident Doctor of the Andalas University Specialist Obstetrics and Gynecology Education Program with graduation in 2020 ($p = 0.040$, $p < 0.05$).



eISSN : 2579-8324

pISSN : 2579-8323

Address for Correspondence:Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127**Website:**<http://jurnalobgin.fk.unand.ac.id/index.php/JOE>

The level of stress is related to graduation or graduation in accordance with another study conducted by Rizka in and Rahim in 2010 where a severe level of stress affects the outcome of an increase in the level of medical students.²¹

Qualitative research in this study was conducted on stressors that cause stress ARS and SRS by using the source triangulation method, namely the results of questionnaires, Focus Group Discussion (FGD) and document review.

- **ARS (*Academic Related Stressor*)**

Academic-related stressors refer to stressors that can be caused by universities, education, or student activities. This stressor is the most significant stressor. There are 3 main things that cause this ARS stressor, namely the requirement to increase the level to subsection and Chief of Resident, network hospital status, and cycle or box exchange at the beginning of each month.

- **SRS (*Social Related Stressor*)**

Socially related stressors refer to forms of social relations with society that can cause stress. This generally relates to time off spent with family and friends, working with the community and dealing with patient problems.

The SRS stressor in PPDS OBGIN UNAND is a significant part of the time with family, and the placement of the cycle is uncertain, based on the FGD that has been carried out, it can be concluded that PPDS OBGIN UNAND during the network hospital station, almost all of them have difficulty meeting family. In addition, the uncertainty of the pattern of changing boxes or cycles, whether to stay in the city of Padang or get regional status makes it difficult for PPDS participants to determine where to live. In addition, there is ignorance of information on the limits of leave requirements and the amount of leave allowed for 1 semester. A document review was conducted where more than half of the residents were from outside West Sumatra (58%), and only 21% lived with their families. This is one of the causes of stress for residents where meeting family is quite difficult.

CONCLUSION

The highest stress level for the Resident Doctor of PPDS Obstetrics and Gynecology Andalas University in 2020 was 60.3% at a moderate level. There is a relationship between stress levels with graduation and semester levels in 2020. Meanwhile, in qualitative research, the highest stress domain was obtained at the Resident Doctors of PPDS Obstetrics and Gynecology Andalas University with semester levels in 2020 being ARS (*Academic Related Stressor*) and SRS (*Social Related stressors*).

REFERENCES

1. Ahmed SM, Hershberger, J P, Lemkau, Parr J. Psychosocial Influences on Health. Textbook of Family Medicine. ed2016. 25-30 p.



eISSN : 2579-8324

pISSN : 2579-8323

Address for Correspondence:

Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127

Website:

<http://jurnalobgin.fk.unand.ac.id/index.php/JOE>

2. Micaela B. Owusu MD, M.Sc., Deanna C. Chaukos MD, Elyse R. Park PD, M.P.H., Gregory L. Fricchione MD. Mind–Body Medicine: Massachusetts General Hospital Handbook of General Hospital Psychiatry.; 2018. 455-60 p.
3. Kupriyanov R, & Zhdanov, R. (2014). The eustress concept: Problems and out-looks. *World Journal of Medical Sciences*, 11(2), 179-185. doi: 10.5829/idosi.wjms.2014.11.2.8433.
4. Średniawa A DD, Krotos A, Wojtaś D, Kostecka N, Tomasiak T. Insomnia and the level of stress among students in Krakow, Poland., 2019 TPP.
5. Badan Penelitian dan Pengembangan Kesehatan kementerian Kesehatan RI. Riset Kesehatan Dasar. Kementerian Kesehatan RI. 2013. Diakses 28 Januari 2020. Tersedia pada www.depkes.go.id/resources/download/general/Hasil%20Risikesdas%202013.pdf.
6. Teori Stres: Stimulus, Respons, dan Transaksional. In: (NTOU) NTOU, editor. *Buletin Psikologi* 2016. p. Vol. 24, No. 1, 1 – 11.
7. Putri IA, Soedibyo S. Tingkat Depresi Peserta Program Pendidikan Dokter Spesialis Ilmu Kesehatan Anak FKUI RSCM dan faktor-Faktor yang Terkait. *Sari Pediatri*. 2011;13(1):70-8.
8. West CP, Tan AD, Shanafelt TD. Association of resident fatigue and distress with occupational blood and body fluid exposures and motor vehicle incidents. *Mayo Clinic proceedings*. 2012;87(12):1138-44.
9. Navines R, Olive V, Ariz J, Lopez J, Tortajada M, et al. (2016) Stress and Burnout During the First Year of Residence Training in a University Teaching Hospital: Preliminary Data. *Dual Diagn Open Acc* 1:17. doi: 10.21767/2472-5048.100017.
10. Ogundipe OA, Olagunju AT, Lasebikan VO, Coker AO. 2014. Burnout among doctors in residency training in a tertiary hospital. *Asian Journal of Psychiatry* 10: 27-32.
11. Salam A, Segal DM, Abu-Helalah MA, Gutierrez ML, Joosub I, Ahmed W, et al. The impact of work-related stress on medication errors in Eastern Region Saudi Arabia. *International journal for quality in health care : journal of the International Society for Quality in Health Care*. 2019;31(1):30-5.
12. Lockley SW, Barger LK, Ayas NT, Rothschild JM, Czeisler CA, Landrigan CP. Effects of health care provider work hours and sleep deprivation on safety and performance. *Jt Comm J Qual Patient Saf*. 2007;33(11 Suppl):7–18. doi: 10.1016/S1553-7250(07)33109-7.
13. Ebrahimi S, Kargar Z. Occupational stress among medical residents in educational hospitals. *Annals of occupational and environmental medicine*. 2018;30:51.
14. Buku Pedoman Program Pendidikan Dokter Spesialis Obstetri dan Ginekologi Universitas Andalas. Padang. 2018.
15. M, Lefrandt R, Santosa F. Tinjauan etik regulasi jam kerja dokter di Indonesia. JEKI.



eISSN : 2579-8324

pISSN : 2579-8323

ANDALAS OBSTETRICS AND GYNECOLOGY JOURNAL**Address for Correspondence:**

Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology,
RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127

Website:

<http://jurnalobgin.fk.unand.ac.id/index.php/JOE>

2017;1(1):25–9. doi: 10.26880/jeki.v1i1.6.

16. Siyoto S, Sodik MA. Dasar Metodologi Penelitian. 1 ed. Yogyakarta: Literasi Media Publishing; 2015.
17. Saiful M. 2014. The Medical Student Stressor Questionner (MSSQ) Manual. www.Researchgate/MSSQ-diakses tanggal 2 Februari 2020.
18. Yahaya SN, Wahab SFA, Yusoff MSB, Yasin MAM, Rahman MAA. Prevalence and associated factors of stress, anxiety and depression among emergency medical officers in Malaysian hospitals. *World journal of emergency medicine*. 2018;9(3):178-86.
19. Jafari N, Loghmani A, Montazeri A. Mental health of Medical Students in Different Levels of Training. *International journal of preventive medicine*. 2012;3(Suppl 1):S107-12.
20. Moutinho ILD, Maddalena NdCP, Roland RK. Depression, stress and anxiety in medical students: A cross-sectional comparison between students from different semesters. *Rev Assoc Med Bras* 63 (1). 2017.
21. Yusoff MSB, Rahim AFA. The medical student stressor questionnaire MSSQ) manual. Kota Bharu: KKMED Publication; 2010. p. 1-21.
22. Hidayat A, Ariadi A, Firdawati F. The Relationship between Menopause and Depression in Padang. *Journal Obgin Emas. Universitas Andalas*; 2021 Jul 8;5(2):206 Tersedia di: <http://dx.doi.org/10.25077/aoj.5.2.206-214.2021A>